

INFORMATION DISCLOSURE CITATION

ATTY. DOCKET NO.

620-371

APPLICANT

Roberto Angelo MOTTERLINI

FILING DATE

May 18, 2005

SERIAL NO.

unknown

SERIAL NO. 10/535508
unknown

TC/A.U.

unknown

(Use several sheets if necessary)

U.S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

[illegible]

OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)

[illegible]

***Examiner**

/Ali Soroush/

Date Considered

10/01/2007

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

**INFORMATION DISCLOSURE
CITATION**

ATTY. DOCKET NO.

SERIAL NO.

620-371

10/535,508

APPLICANT

Roberto Angelo MOTTERLINI

(Use several sheets if necessary)

FILING DATE

GROUP

May 18, 2005

1615

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/A.S./	1	5,882,674	03/1999	Herrmann et al.		

FOREIGN PATENT DOCUMENTS

		DOCUMENT	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
/A.S./	2	WO 98/48848	11/1998	WIPO				
	3	WO 91/01128	02/1991	WIPO				
	4	WO 91/01301	02/1991	WIPO				
	5	WO 98/29115	07/1998	WIPO				
	6	HU-B-211 084	10/1995	Hungary				
	7	WO 95/05814	03/1995	WIPO				
	8	WO 00/56743	09/2000	WIPO				
↓	52	2002/0155166	10/2002	Choi et al				

OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)

/A.S./	9	Sjostrand T. Endogenous formation of carbon monoxide in man under normal and pathological conditions. Scan J Clin Lab Invest 1949;1:201-14.
	10	Coburn RF, Blakemore WS, Forster RE. Endogenous carbon monoxide production in man. J Clin Invest 1963;42:1172-8.
	11	Tenhunen R, Marver HS, Schmid R. Microsomal heme oxygenase. Characterization of the enzyme. J Biol Chem 1969;244:6388-94.
	12	Maines MD. Heme oxygenase: function, multiplicity, regulatory mechanisms, and clinical applications. FASEB J 1988;2:2557-68.
	13	Furchgott RF, Jothianandan D. Endothelium-dependent and -independent vasodilation involving cGMP: relaxation induced by nitric oxide, carbon monoxide and light. Blood Vessels 1991;28:52-61.
	14	Morita T, Perrella MA, Lee ME, Kourembanas S. Smooth muscle cell-derived carbon monoxide is a regulator of vascular cGMP. Proc Natl Acad Sci USA 1995;92:1475-9.
	15	Sammur IA, Foresti R, Clark JE, Exon DJ, Vesely MJ, Sarathchandra P, Green CJ, Motterlini R. Carbon monoxide is a major contributor to the regulation of vascular tone in aortas expressing high levels of haeme oxygenase-1. Br J Pharmacol 1998;125:1437-44.
	16	Maines MD. The heme oxygenase system: a regulator of second messenger gases. Annu Rev Pharmacol Toxicol 1997;37:517-54.
	17	Soares MP, Lin Y, Anrather J, Csizmadia E, Takigami K, Sato K, Grey ST, Colvin RP, Choi AM, Poss KD, et al. Expression of heme oxygenase-1 can determine cardiac xenograft survival. Nature Med 1998;4:1073-7.
↓	18	Willis D, Moore AR, Frederick R, Willoughby DA. Heme oxygenase: a novel target for the modulation of inflammatory response. Nature Med 1996;2:87-90.

*Examiner

/Ali Soroush/

Date Considered

10/01/2007

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered.
Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)

INFORMATION DISCLOSURE CITATION	ATTY. DOCKET NO.	SERIAL NO.
	620-371	10/535,508
(Use several sheets if necessary)	APPLICANT	
	Roberto Angelo MOTTERLINI	
	FILING DATE	GROUP
	May 18, 2005	1615

FOREIGN PATENT DOCUMENTS

DOCUMENT	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
					YES	NO
/A.S./ 26	WO 02/080923	10/2002	WIPO			
/A.S./ 27	WO 94/22482	10/1994	WIPO			

OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)

/A.S./	19	Motterlini R, Gonzales A, Foresti R, Clark JE, Green CJ, Winslow RM. Heme oxygenase-1-derived carbon monoxide contributes to the suppression of acute hypertensive responses <i>in vivo</i> . <i>Circ Res</i> 1998;83:568-77.
	20	Otterbein LE, Mantell LL, Choi AMK. Carbon monoxide provides protection against hyperoxic lung injury. <i>Am J Physiol</i> 1999;276:L688-94.
	21	Otterbein LE, Kolls JK, Mantell LL, Cook JL, Alam J, Choi AMK. Exogenous administration of heme oxygenase-1 by gene transfer provides protection against hyperoxia-induced lung injury. <i>J Clin Invest</i> 1999;103:1047-54.
	22	Herrick RS, Brown TL. Flash photolytic investigation of photoinduced carbon monoxide dissociation from dinuclear manganese carbonyl compounds. <i>Inorg Chem</i> 1984;23:4550-3.
	23	Alessio E, Milani B, Bolle M, Mestroni G, Falechini P, Todone F, Geremia S, Calligaris M. Carbonyl derivatives of chloride-dimethyl sulfoxide-ruthenium(II) complexes: synthesis, structural characterization, and reactivity of Ru(CO) _x (DMSO) _{4-x} Cl ₂ complexes (x=1-3). <i>Inorg Chem</i> 1995;34:4722-34.
	24	Sato K., Balla J., Otterbein L., Smith R.N., Brouard S., Lin Y., Csizmadia E., Sevigny J., Robson S.C., Vercellotti G., Choi A.M., Bach F.H., Soares M.P. Carbon monoxide generated by heme oxygenase-1 suppresses the rejection of mouse-to-rat cardiac transplants. <i>J. Immunol.</i> 166:4185-4194, 2001.
	25	G. Pneumatikakis, A. Yannopoulos and J. Markopoulos, <i>Inorg. Chim. Acta</i> , 1988, 151, 243.
	28	Motterlini R. et al., Carbon monoxide-releasing molecules: characterization of biomedical and vascular activities, <i>Circulation Research</i> . 2002, vol. 90, no. 2, E17-E24.
	29	Yan Y.K. et al., Cytotoxicity of rhenium (I) alkoxo and hydroxo carbonyl complexes in murin and human tumor cells, <i>Pharmazie</i> (2000), 55(4), 307-313.
	30	Becker M.J. et al., Age related changes in antibody dependent cell mediated cytotoxicity in mouse spleen, <i>Israel J. Medical Sciences</i> (1979), vol. 15, no. 2, 147-150.
	31	Nagai M. et al., Unusual CO bonding geometry in abnormal subunits of hemoglobin M Boston and hemoglobin M Saskatoon, <i>Biochemistry</i> (1991), vol. 30, no. 26, 6495-6503.
	32	Tomita A. et al., Structure and reaction of bis(L-cysteinato)dicarbonyliron(II), <i>Inorganic and Nuclear Chemistry Letters</i> (1968), 4(12), 715-18.
	33	Ferrier, F.; Terzian, G.; Mossoyan, J.; Benlian, D, FTIR spectrometric study of geometrical isomers of dicarbonyl ferrobiscysteinate Influence of the counter cation. Laboratoire de Chimie de Coordination, D22, Universite de Provence, Av. Escadrille Normandie-Niemen, Marseille, Fr. <i>J. Mol. Struct.</i> (1995), 344(3), 189-93. CODEN: JMOSB4 ISSN: 0022-2860. Journal written in English. CAN 122:250765 AN 1995:414110 CAPLUS (Copyright 2002 ACS)
↓	34	Szakacs-Schmidt, Aniko; Kreis, Jozsef; Marko, Laszlo; Nagy-Magos, Zsuzsa; Takacs, Janos, Iron(II) thiolates as reversible carbon monoxide carriers, <i>Res. Inst. Chem. Eng., Hung. Acad. Sci., Veszprem, Hung.</i> <i>Inorg. Chim. Acta</i> (1992), 198-200 401-5. CODEN: ICHAA3 ISSN: 0020-1693. Journal written in English. CAN 117:263637 AN 1992:663637 CAPLUS (Copyright 2002 ACS)

*Examiner	/Ali Soroush/	Date Considered	10/01/2007
-----------	---------------	-----------------	------------

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)

**INFORMATION DISCLOSURE
CITATION**

ATTY. DOCKET NO.

SERIAL NO.

620-371

10/535,508

APPLICANT

Roberto Angelo MOTTERLINI

(Use several sheets if necessary)

FILING DATE

GROUP

May 18, 2005

1615

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/A.S./	43	WO 02/092075	11/2002	WIPO		
/A.S./	54	WO 02/078684	10/2002	WIPO		
/A.S./	53	WO 00/56145	09/2000	WIPO		

OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)

/A.S./	35	Takacs, Janos; Soos, Erika; Nagy-Magos, Zsuzsa; Marko, Laszlo; Gervasio, Giuliana; Hoffmann, Thomas, Synthesis and molecular structure of carbonyl derivatives of iron(II) thiolates containing nitrogen-donor ligands, Res. Group Petrochem., Hung. Acad. Sci., Veszprem, Hung. Inorg. Chim. Acta (1989), 166(1), 39-46. CODEN: ICHAA3 ISSN: 0020-1693. Journal written in English. CAN 113:16859 AN 1990:416859 CAPLUS (Copyright 2002 ACS)
	36	Carroll, James A.; Fisher, David R.; Rayner-Canham, Geoffrey W.; Sutton, Derek, Ligand abstraction in the reaction of aryldiazonium ions with some iron complexes containing coordinated cysteine, maleonitriledithiol, or triarylphosphine, Dep. Chem., Simon Fraser Univ., Burnaby, B. C., Can. Can. J. Chem. (1974), 52(10), 1914-22. CODEN: CJCHAG Journal written in English. CAN 81:32728 AN 1974:432728 CAPLUS (Copyright 2002 ACS)
	37	M.P. Schubert, The action of carbon monoxide on iron and cobalt complexes of cysteine, J. Am. Chem. Soc., 1933, 55, 4564-4570.D54
	38	Y. Huang, M.C. Marden, J.C. Lambry, M.P., Photolysis of the histidine-heme-carbon monoxide complex, Fontaine-Aupart, R. Pansu, J.L. Martin and C. Poyart, J. Am. Chem. Soc., 1991, 113, 9141.
	39	J. Silver and B. Lukas, Moessbauer studies on protoporphyrin IX iron (II) solutions containing sulfur ligands and their carbonyl adducts. Models for the active site of cytochromes P-450, Inorg. Chim. Acta, 1984, 91, 279.
	40	C.M. Wang and W.S., A correlation of the visible and Soret spectra of dioxygen- and carbon monoxide-heme complexes and five-coordinate heme complexes with the spectra of oxy-, carboxy-, and deoxyhemoglobins, Brinigar, Biochemistry, 1979, 18, 4960.
	41	A.A. Diamantis and J.V. Dubrawski, Preparation and structure of ethylenediaminetetraacetate complexes and other π -acceptor ligands, Inorganic Chemistry (1981), 20(4), 1142-1150.
	42	R. Urban et. al., "Metal complexes of biologically important ligands, LXXXVII alpha-amino carboxylate complexes of palladium(II), iridium(III) and ruthenium(II) from chloro-bridged ortho-metallated metal compounds and [(OC)3Ru(Cl)(μ -CL)]2, Organomet. Chem. 1996, 517 191
	44	Nydegger, U. E. et al.; "New concepts in organ preservation"; Transplant Immunology; 2002; 9; 215-25
	45	Holmuhamedov, E. L. et al.; "Mitochondrial ATP-sensitive K+ channels modulate cardiac mitochondrial function."; Am. J. Physiol.; 1998; 275; H1567-76
	46	Lawton, J. S. et al.; "Myocardial oxygen consumption in the rabbit heart after ischemia: hyperpolarized arrest with pinacidil versus depolarized hyperkalemic arrest."; Circulation; 1997; 96(9 Suppl): II-247-52

*Examiner

/Ali Soroush/

Date Considered

10/01/2007

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)

**INFORMATION DISCLOSURE
CITATION**

ATTY. DOCKET NO.

SERIAL NO.

620-371

10/535,508

APPLICANT

Roberto Angelo MOTTERLINI

(Use several sheets if necessary)

FILING DATE

GROUP

May 18, 2005

1615

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)

/A.S.	47	Motterlini R. et al.; "Carbon monoxide-releasing molecules: characterization of biochemical and vascular activities"; Circ. Res.; 2002; 90; E17-E24
	48	Motterlini, R. et al.; "Functional and metabolic effects of propionyl-L-carnitine in the isolated perfused hypertrophied rat heart."; Mol. Cell Biochem.; 1992; 116; 139-45
	49	Wang, L. et al.; "Preconditioning limits mitochondrial Ca^{2+} during ischemia in rat hearts: role of K_{ATP} (channels)"; Am. J. Physiol. Heart Circ. Physiol.; 2001; 280; H2321-H2328
	50	Wang, R. et al.; "The chemical modification of K_{Ca} channels by carbon monoxide in vascular smooth muscle cells."; J. Biol. Chem.; 1997; 272; 8222-26
	51	Wu, L. et al.; "Different mechanisms underlying the stimulation of K(Ca) channels by nitric oxide and carbon monoxide."; J. Clin. Invest.; 2002; 110; 691-700
↓	55	Yachie, A. et al.; "Oxidative stress causes enhanced endothelial cell injury in human heme oxygenase-1 deficiency"; J. Clin. Invest.; 1999; 103; 129-35

*Examiner

/Ali Sorouch/

Date Considered

10/01/2007

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)

**INFORMATION DISCLOSURE
CITATION**

ATTY. DOCKET NO.

SERIAL NO.

620-371

10/535,508

APPLICANT

Roberto Angelo MOTTERLINI

(Use several sheets if necessary)

FILING DATE

GROUP

May 18, 2005

1615

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

		DOCUMENT	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
/A.S./	56	WO 02/078684	10/2002	WIPO				
	57	WO 03/000114	01/2003	WIPO				
	58	WO 03/066067	08/2003	WIPO				
	59	WO 03/072024	09/2003	WIPO				
	60	WO 03/088923	10/2003	WIPO				
	61	WO 03/088981	10/2003	WIPO				
↓	62	WO 03/094932	11/2003	WIPO				

OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)

/A.S./	63	Sacks, P. V. et al.; "Comparative bioavailability of elemental iron powders for repair of iron deficiency anemia in rats. Studies of efficacy and toxicity of carbonyl iron"; The American Journal of Clinical Nutrition; 1978; 31;566-73
	64	Huebers, H. A. et al.; "Absorption of carbonyl iron"; J. Lab. Clin. Med.; 1986; 108; 473-8
	65	Gordeuk, V. P. et al; "Carbonyl Iron Therapy for Iron Deficiency Anemia"; Blood; 1986; 67(3); 745-752
	66	Durante W.; "Heme Oxygenase-1 in Growth Control and its Clinical Application to Vascular Disease"; J. Cell. Physiol.; 2003; 195; 373-82
↓	67	Motterlini, R. et al.; "Characterization of vasoactive effects elicited by carbon monoxide-releasing molecules."; Journal of Vascular Research, Abstracts, 8 th International Symposium on Mechanisms of Vasodilation; May 31 – June 3, 2001; 055

*Examiner

/Ali Soroush/

Date Considered

10/01/2007

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered.
Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)